

## UNCLASSIFIED

PE NUMBER: 0702207F

PE TITLE: Depot Maintenance (Non-IF)

## Exhibit R-2, RDT&amp;E Budget Item Justification

DATE

February 2004

## BUDGET ACTIVITY

## 07 Operational System Development

## PE NUMBER AND TITLE

## 0702207F Depot Maintenance (Non-IF)

Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.209	1.394	1.431	1.401	1.423	1.446	1.469	Continuing	TBD
3326 Precision Measurement & Calibration	2.209	1.394	1.431	1.401	1.423	1.446	1.469	Continuing	TBD

(U) **A. Mission Description and Budget Item Justification**

This program develops, tests, and evaluates national and Air Force measurement standards (hardware) and calibration equipment in support of all Air Force programs and activities, including Precision Measurement Equipment Laboratories (PMELs) worldwide. Metrology research and development provides technology to support systems in all phases of development and acquisition, as well as Air Force R&D laboratories, test ranges, ground test facilities, and operational weapons systems support. Rapidly changing technology requires continuing research and development of measurement standards and calibration equipment to ensure modern weapon systems meet Air Force readiness objectives. This program addresses all metrology disciplines and includes the technology areas of laser, infrared, microwave, millimeter wave, optical, physical, mechanical, electrical, electronic, and ionizing radiation measurements. Metrology is a technical discipline devoted to the science of measurements and to the study and improvement of measurement technology. Measurements are the foundation of military system development, quality assurance, hardware conformance testing and system readiness tests. The integrity of these tests is assured through calibration and traceability assurance schemes. The capability to measure and calibrate must parallel the emergence of new technology, new ranges, and new capabilities of military systems. Lack of new measurement capability impedes or blocks the successful exploitation of new technologies, especially in the movement from development laboratory to production to deployment. R&D efforts are essential within the DoD to pace these requirements, otherwise, these same new systems will suffer time delays, excessive cost, and increased risk due to unreliable test results in all phases of development, production, deployment and operation.

This program is in budget activity 7 - Operational System Development because it supports operational systems.

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	2.296	1.406	1.435
(U) Current PBR/President's Budget	2.209	1.394	1.431
(U) Total Adjustments	-0.087	-0.012	
(U) Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-0.087	-0.012	
SBIR/STTR Transfer			
(U) <b><u>Significant Program Changes:</u></b>			
None			

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## Exhibit R-2a, RDT&amp;E Project Justification

DATE

February 2004

## BUDGET ACTIVITY

07 Operational System Development

## PE NUMBER AND TITLE

0702207F Depot Maintenance (Non-IF)

## PROJECT NUMBER AND TITLE

3326 Precision Measurement &amp; Calibration

Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
3326 Precision Measurement & Calibration	2.209	1.394	1.431	1.401	1.423	1.446	1.469	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**

This program develops, tests, and evaluates national and Air Force measurement standards (hardware) and calibration equipment in support of all Air Force programs and activities, including Precision Measurement Equipment Laboratories (PMELs) worldwide. Metrology research and development provides technology to support systems in all phases of development and acquisition, as well as Air Force R&D laboratories, test ranges, ground test facilities, and operational weapons systems support. Rapidly changing technology requires continuing research and development of measurement standards and calibration equipment to ensure modern weapon systems meet Air Force readiness objectives. This program addresses all metrology disciplines and includes the technology areas of laser, infrared, microwave, millimeter wave, optical, physical, mechanical, electrical, electronic, and ionizing radiation measurements. Metrology is a technical discipline devoted to the science of measurements and to the study and improvement of measurement technology. Measurements are the foundation of military system development, quality assurance, hardware conformance testing and system readiness tests. The integrity of these tests is assured through calibration and traceability assurance schemes. The capability to measure and calibrate must parallel the emergence of new technology, new ranges, and new capabilities of military systems. Lack of new measurement capability impedes or blocks the successful exploitation of new technologies, especially in the movement from development laboratory to production to deployment. R&D efforts are essential within the DoD to pace these requirements, otherwise, these same new systems will suffer time delays, excessive cost, and increased risk due to unreliable test results in all phases of development, production, deployment and operation.

This program is in budget activity 7 - Operational System Development because it supports operational systems.

(U) **B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Continue development of national measurement standards to support Air Force infrared / laser / electro-optical weapon systems and support equipment.	1.010	0.510	0.590
(U) Continue development of standards for electrical measurements to support high accuracy electronic test equipment.	0.480	0.235	0.186
(U) Continue development of standards for radar support, RF communication systems, and radar cross section range measurements.	0.515	0.330	0.275
(U) Continue the development of improved calibration standards to support physical, mechanical and electro-mechanical support equipment.	0.129	0.120	0.175
(U) Continue the development of national standards for calibration of ionizing radiation hazard instrumentation.	0.000	0.034	0.030
(U) Continue development of improved standards and procedures to support chemical/biological measurements	0.075	0.165	0.175
(U) Total Cost	2.209	1.394	1.431

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

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PROJECT NUMBER AND TITLE

3326 Precision Measurement &amp; Calibration

(U) **C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	

(U) AF RDTE

0.000

(U) **D. Acquisition Strategy**

Primarily accomplish through intergovernmental transfer between the Department of Defense and other Federal Departments.

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Exhibit R-3, RDT&E Project Cost Analysis										DATE February 2004		
BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0702207F Depot Maintenance (Non-IF)					PROJECT NUMBER AND TITLE 3326 Precision Measurement & Calibration		
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2004</u> <u>Cost</u>	<u>FY</u> <u>2004</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2005</u> <u>Cost</u>	<u>FY</u> <u>2005</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total</u> <u>Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u>												
National Institute of Standards & Technology	MIPR (DD FORM 448)		20.421	2.110		1.284		1.306		Continuing	TBD	
Department of Energy	MIPR (DD FORM 448)		0.510	0.075		0.085		0.100		Continuing	TBD	
AFMC	In House		0.211	0.024		0.025		0.025		Continuing	TBD	
Subtotal Product Development			21.142	2.209		1.394		1.431		Continuing	TBD	0.000
Remarks:												
(U) <u>Support</u>												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Test &amp; Evaluation</u>												
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			21.142	2.209		1.394		1.431		Continuing	TBD	0.000



Exhibit R-4, RDT&E Schedule Profile		DATE <b>February 2004</b>
BUDGET ACTIVITY <b>07 Operational System Development</b>	PE NUMBER AND TITLE <b>0702207F Depot Maintenance (Non-IF)</b>	PROJECT NUMBER AND TITLE <b>3326 Precision Measurement &amp; Calibration</b>
<p style="text-align: center;">A schedule is not applicable due to the nature of this PE</p>		
Project 3326	R-1 Shopping List - Item No. 216-6 of 216-7	Exhibit R-4 (PE 0702207F)

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Exhibit R-4a, RDT&E Schedule Detail		DATE <b>February 2004</b>
BUDGET ACTIVITY <b>07 Operational System Development</b>	PE NUMBER AND TITLE <b>0702207F Depot Maintenance (Non-IF)</b>	PROJECT NUMBER AND TITLE <b>3326 Precision Measurement &amp; Calibration</b>

**(U) Schedule Profile**

FY 2003FY 2004FY 2005

(U) A schedule for Depot Maintenance PE is Not Applicable due to the nature of this project.